

C. D. Zimmerman, so the moth does appear from early summer until autumn. Mr. A. S. Fuller (Am. Ent. vol. 1, N. S., page 11) believes that "the grubs go a much greater distance from their burrows before passing into pupa state than is generally supposed." This from the fact that he found "at various times during the summer in almond trees larvae of all sizes and no pupae." I have rarely found their cocoons at any distance from their burrows, frequently in them covered with gum or bark. From observations on other species it appears that larvae apparently full grown at midsummer may hibernate without changing.

*Fyri* is a rare form here, so far as ascertained after search and inquiry.

*Trochilium denudatum* Harris is also rare; June 9th last I found one pupa skin, presumably of this species, protruding from an ash shade tree in this city, but no further evidence of its presence could be obtained. I have one moth taken here June 13th, which is doubtfully referred to this species.

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#### NOTES ON COCCIDÆ.

BY J. HENRY COMSTOCK, WASHINGTON, D. C.

There occurs in certain orange groves in southern California a species of *Aspidiotus* which infests the bark, leaves and fruit of the orange and which from the extent of its ravages has created great alarm. This insect is popularly known by the fruit growers of that section as the red scale, although this name does not well describe its color. This species as yet occurs in only a few of the Californian orange groves, but is more to be feared than any other scale insect. I have conclusive evidence that it was introduced into that State from Australia. It is, I believe, as yet undescribed, and I offer the following diagnosis:

*ASPIDIOTUS CITRI*, n. sp. *Scale of the female*.—The scale of the female in outline is much flattened, varying in color from a light brownish gray to a bright reddish brown. In fresh specimens there is a white nipple-like prominence which is nearly central and is the remains of a tuft of cottony excretion, beneath which the first larval skin was shed; surrounding this and occupying one third of the diameter of the scale is a

ring which is slightly darker than the remainder of the scale and indicates the position of the second larval moult.

*Female*.—The female is light yellow in color in the adolescent stages, becoming brownish as it reaches maturity. When fully developed the thorax extends backward in a large rounded lobe on each side, projecting beyond the extremity of the abdomen, giving the body a reniform shape.

*Scale of male*.—The scale of the male resembles that of the female, excepting that it is only one fourth as large, and the posterior side is prolonged into a flap which is quite thin.

*Male*.—The male is light yellow; thoracic band brown; eyes purplish black.

The species described by Mr. Ashmead in the November number of the American Entomologist under the name of *Chrysomphalus ficus* Riley MS. is simply a species of *Aspidiotus*; and is not that known as the red scale in California, as is indicated by Mr. Ashmead. Although I have carefully explored many orange groves both in Florida and California, and have had extensive correspondence with orange growers, I have been unable to find *Aspidiotus ficus* in the last named State, and only in a single grove in Florida. Here it was first observed by Mr. G. M. Holmes on some sour orange trees imported from Cuba. On sending specimens of it to a friend at Havana, I received others from that place and the information that it is a very common species in the public gardens of that city. The species can easily be distinguished from *Aspidiotus citri* by an examination of the scale alone, which is much darker, being sometimes almost black.

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## DESCRIPTION OF THE PREPARATORY STAGES OF PAPILIO PHILENOR, LINN.

BY W. H. EDWARDS, COALBURGH, W. VA.

EGG—Spherical; the surface much covered with a rough crust which rises to a summit, either small and pointed, or rather large and truncated; the sides of this crust irregularly melon-ribbed; color of surface russet, of the crust bright ferruginous. Duration of this stage 7 to 9 days.